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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,082	02/15/2000	Gen Sasaki	6318-0024-2	5466

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AGGARWAL, YOGESH K

ART UNIT	PAPER NUMBER
2615	10

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 April 2004_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-14_ is/are pending in the application.

    4a) Of the above claim(s) _6-14_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _15 February 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _3,4,6_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

Response to Arguments

1.   Applicant's election with traverse of species associated with figures 2-5 (Claims 1-5) in

Paper No. 9 is acknowledged. The traversal is on the ground(s) that the subject matter of all

species is sufficiently related that a thorough search for the subject matter of any one species

would encompass a search for the subject matter of the remaining species. This is not found

persuasive because the non-elected species contain features, which would not be included in a

class/subclass search or text search for the elected species.

However, the applicant is reminded that upon the allowance of a generic claim, applicant

will be entitled to consideration of claims to additional species which are written in dependent

form or otherwise include all the limitations of an allowed generic claim as provided by 37

CFR 1.141. If claims are added after the election, applicant must indicate which are readable

upon the elected species. MPEP § 809.02(a).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masimo et al.

(US Patent # 5,189,404) in view of Anderson (US Patent # 6,011,585).

[Claim 1]

Masimo et al. teaches a signal processing circuit (figure 3a) in an image input apparatus (figure

1) which stores, in storage units of a main memory (figure 3a: 11), a unit image signal in

predetermined units and arranged in two dimensions, said signal processing circuit reading and

processing said unit image signal stored in said main memory, said signal processing circuit,

comprising:

first (figure 3a: 13) and second storage (figure 3a: 14) means provided with a plurality of storage

regions (col. 4 lines 25-31). Although Masimo is silent regarding the storage regions being of the

same number of bits as said unit image signal, Official notice is taken of the fact that it is well

known to produce digitized image data in an 8-bit format. Thus the 8x8 image storage means

disclosed in Masimo (col. 4 lines 25-31) would clearly conform to a well-known image data

format. In Masimo the storage regions of said first storage means and said storage regions of said

second storage means are connected one another (figure 4b), such that an array of said unit

image signal stored in said main memory is stored in said storage regions of said second storage

means in a state of being rotated 90 degrees counterclockwise (col. 4 lines 54-61, figure 3B),

through proceeding that said unit image signal stored in said main memory is transferred and

stored in said storage regions of said first storage means, and then said unit image signal stored

in said storage regions of said first storage means is transferred and stored in said storage regions

of said second storage means (figure 4b).

Masimo does not specifically identify the source of the unit image signal and therefore

does not disclose it as being picked up by an image pickup device. However it is well known to

produce image signals using a camera as disclosed by Anderson's image pick up device for

capturing images (figure 3A: 304).

Therefore taking the combined teachings of Masimo and Anderson, it would have been obvious to one skilled in the art to have been motivated at the time of the invention to provide the Masimo device with image signals from an image pick-up device since image pick-up devices are commonly used sources for image data.

[Claim 3]

Masimo et al. teaches a signal processing circuit (figure 3a) of an image input apparatus (figure 1), comprising first (figure 4b: 42) and second (figure 4b: 41a-d) register groups provided with a plurality of storage regions. Although Masimo is silent regarding the storage regions being of the same number of bits as said unit image signal, Official notice is taken of the fact that it is well known to produce digitized image data in an 8-bit format. Thus the 8x8 image storage means disclosed in Masimo (col. 4 lines 25-31) would clearly conform to a well-known image data format. In Masimo the first and second register groups having first to fourth registers, respectively, said first to fourth registers having zero-th to third storage regions, respectively, wherein said zero-th storage regions of said first to fourth registers of said first register group are connected directly, by a predetermined connecting line, to said zero-th to third storage regions of said fourth register of said second register group said first storage regions of said first to fourth registers of said first register group are connected directly, by a predetermined connecting line, to said zero-th to third storage regions of said third register of said second register group said second storage regions of said first to fourth registers of said first register group are connected directly, by a predetermined connecting line, to said zero-th to third storage regions of said second register of said second register group; and said third storage regions of said first to fourth

registers of said first register group are connected directly, by a predetermined connecting line, to

said zero-th to third storage regions of said first register of said second register group (figure 4b).

Masimo does not specifically identify the source of the unit image signal and therefore

does not disclose it as being obtained by an image pickup device in an image input apparatus.

However it is well known to produce image signals using a camera as disclosed by Anderson's

image pick up device for capturing images (figure 3A: 304).

Therefore taking the combined teachings of Masimo and Anderson, it would have been

obvious to one skilled in the art to have been motivated at the time of the invention to provide

the Masimo device with image signals from an image pick-up device since image pick-up

devices are commonly used sources for image data.

4.   Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell

et al. (US Patent # 4,689,824) in view of Anderson (US Patent # 6,011,585).

[Claim 2]

Mitchell et al. teaches a signal processing circuit of an image input apparatus (figure 4),

comprising first (registers 5-8) and second storage means (registers 17-20) provided with a

plurality of storage regions of the same number of bits (8 bits) as a unit image signal in

predetermined units (See figure 4) and arranged in two dimensions, wherein said storage regions

of said first storage means and said storage regions of said second storage means are directly

connected to one another by a predetermined connecting line (logical via pointers), such that an

array of said unit image signal stored in said storage regions of said first storage means is

reflected about a centerline of said array, to be stored in said storage regions of said second

storage means (When the register groups are connected as shown in figure 4 of Mitchell, the image is reflected along its centerline).

Mitchell does not specifically identify the source of the unit image signal and therefore does not disclose it as being obtained by an image pickup device that is in an image input apparatus. However Anderson discloses an image pick up device for capturing images (figure 3A: 304) contained in an image input apparatus (figure 2, camera) and a memory, which contains an autorotate unit for rotating images (col. 2 lines 48-61).

Therefore taking the combined teachings of Mitchell and Anderson, it would have been obvious to one skilled in the art to have been motivated at the time of the invention to have an image pick up device contained in an image input apparatus as taught in Mitchell to be included in an image pick-up device. The benefit of doing so would be to transform the captured image data into rotated image data in response to a portrait signal as taught by Anderson (col. 2 lines 56-58).

[Claim 5]

Mitchell teaches a signal processing circuit of an image input apparatus, comprising second (figure 4: register group 5-8) and third register groups (figure 4: register group 17-20) provided with a plurality of storage regions of the same number of bits (8 bits) as a unit image signal in predetermined units (see figure 4) that is arranged in two dimensions, said second and third register groups having first to fourth registers, said first to fourth registers having zero-the to third storage regions, wherein said zero-the to third storage regions of said first register of said second register group are connected by a predetermined connecting line (logical via pointers), to said third to zero-the storage regions of said first register of said third register group, respectively

said zero-the to third storage regions of said second register of said second register group are

connected by a predetermined connecting line (logical via pointers), to said third to zero-the

storage regions of said second register of said third register group, respectively; said zero-the to

third storage regions of said third register of said second register group are connected by a

predetermined connecting line (logical via pointers), to said third to zero-the storage regions of

said third register of said third register group, respectively; and said zero-the to third storage

regions of said fourth register of said second register group are connected by a predetermined

connecting line (logical via pointers), to said third to zero-the storage regions of said fourth

register of said third register group, respectively (figure 4 disclose registers 5-8 being connected

directly to registers 17-20 logically via pointers)

Mitchell does not specifically identify the source of the unit image signal and therefore

does not disclose it as being obtained by an image pickup device that is in the image input

apparatus. However Anderson discloses an image pick up device for capturing images (figure

3A: 304) contained in an image input apparatus (figure 2, camera) and a memory, which contains

an autorotate unit for rotating images (col. 2 lines 48-61).

Therefore taking the combined teachings of Mitchell and Anderson, it would have been

obvious to one skilled in the art to have been motivated at the time of the invention to have an

image pick up device contained in an image input apparatus as taught in Mitchell to be included

in an image pick-up device. The benefit of doing so would be to transform the captured image

data into rotated image data in response to a portrait signal as taught by Anderson (col. 2 lines

56-58).

Furthermore Mitchell only teaches software pointers (not directly) to rotate the images

and therefore fail to teach wherein the registers (5-8) of a first register set are being connected to

registers (17-20) of a third register set can be directly connected with predetermined lines.

However, Anderson further teaches rotation of images in software can also be done in hardware

equivalent implementation (col. 13 lines 58-61).

Therefore it would have been obvious to one skilled in the art at the time of the invention

to have been motivated to implement the rotation in Mitchell using direct (hardware) connections

as an obvious alternative to software, as taught by Anderson.

Conclusion

Allowable Subject Matter

5.   Claim 4 is objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

      a.   The following is a statement of reasons for the indication of allowable subject

      matter: The prior art fails to teach different sets of registers (first/second and second/

      third) in an image pick-up device being used together for rotation of images.

      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Yogesh K Aggarwal whose telephone number is (703) 305-0346.

The examiner can normally be reached on M-F 9:00AM-5:30PM.

6.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

7.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA
July 6, 2004

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600